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A drive with a hydro machine

Claims

1. A drive comprising a hydro machine whose injection volume is changeable, comprising an adjustment device (10) for the changing of the injection volume of the hydro machine, comprising a first control valve (5) which is in communication with the adjustment device (10) on the outlet side and which is connected such that it effects a position of the adjustment device (10) causing a low injection volume in a first position and effects a position of the adjustment device (10) causing - compared with this - a large injection volume in a second position,

characterized in that

a control device, preferably a second control valve (3), is provided on which an inlet pressure acts at the inlet side (300) and which is in communication with a first control connection (50) of the first control valve (5) on the outlet side (310), with a pressure loading of the first control connection (50) exerting a force directed in the second position of the first control valve (5), and with the

control device, preferably the second control valve (3), being connected such that it connects the inlet side (300) to the first control connection (50) of the first control valve (5) in a region of low performance requirements.

2. A drive in accordance with claim 1, wherein the hydro machine is designed as a hydraulic motor (11).
3. A drive in accordance with claim 2, wherein the hydraulic motor (11) is designed as an axial piston motor in swash plate construction.
4. A drive in accordance with any of the preceding claims, wherein the first control valve (5) has a second control connection (52) acting in the same manner with the first control connection (50) which is in communication with a first control connection (30) of the second control valve (3) such that both control connections (30, 52) are acted on with the same control pressure.
5. A drive in accordance with claim 4, wherein it has an inflow and an outflow line between which a line extends which has a shuttle valve (6) via which the control pressure can be applied to the second control connection (52) of the first control valve (5) and to the first control connection (30) of the second control valve (3).
6. A drive in accordance with any of preceding claims, wherein the second control valve (3) has a second control connection (32) acting counter to the first control connection (30) and the second control connection (32) is in communication with the inlet side (500) of the first control valve (5) such that the same pressure is applied to the inlet side (500) of the first control valve (5) and to the second control connection (32) of the second control valve (3).
7. A drive in accordance with claim 6, wherein a line (14) extending between the working lines (12, 13) of the hydro machine is provided in which a shuttle valve (9) is arranged via which the inlet side (500) of the first control valve (5) and the

second control connection (32) of the second control valve (3) can have pressure applied.

8. A drive in accordance with any of the preceding claims, wherein a pressure-reducing valve (4) is provided which is in communication at the outlet side (400) with the inlet side (300) of the second control valve (3).
9. A drive in accordance with claim 8, wherein the pressure-reducing valve (4) is in communication with the inlet side (500) of the first control valve (5) on the inlet side (410).
10. A drive in accordance with any of the preceding claims, wherein the second control valve (3) is in communication with the control connection (20) of one or more pressure restricting valves (2), with the pressure restricting valves (2) being arranged in the lines (15, 16) connecting the working lines (12, 13) of the hydro machine and the second control valve (3) being connected such that its inlet side (300) can be connected to the control connections (20) of the pressure restricting valves (2).
11. A drive in accordance with claim 10, wherein the second control valve (3) is connected such that it switches the pressure restricting valves (2) without pressure in the position connecting the inlet side (300) to the first control connection (50) of the first control valve (5) and switches the first control connection (50) of the first control valve (5) without pressure in the position connecting the inlet side (300) with the control connections (20) of the pressure restricting valves (2).
12. A drive in accordance with any of the preceding claims, wherein a brake valve (1) is provided which is in its closed position at a low performance requirement and blocks the backflow of the hydro machine in this position.

13. A drive in accordance with any of control preceding claims, where pressure lines are provided by which the first control valve (5) and/or the second control valve (3) and/or the pressure-reducing valve (4) can be overridden.